

INDEX TO VOLUME XIX

GENERAL ALPHABETICAL INDEX

Entries from the Synopsis of Periodical Literature are indicated by S. (Synopsis); from the Analysis of Current Electrochemical, Chemical and Metallurgical United States Patents by P. (Patents).

A

Abrasives, Increased production of artificial	673
Acetic acid and acetone, Industrial developments relating to the manufacture of, Hibbert	397
—Made in Germany and Switzerland from calcium carbide	399
—War demand	399
Acetone and acetic acid, Industrial developments relating to the manufacture of, Hibbert	397
—For explosives	397
—War demand	399
Acetyl cellulose, Lindsay (P.)	153
Acids (See specific head)	
Acid, Concentrating, Process and apparatus for, Hechenbleickner, (P.)	43
—Molybdc, Recovery for steel mills, Brown	274
—Lynas	274
—Removing suspended TST from spent, Johnson, (P.)	683
—Sulphuric, Excess in Britain	177
—Sulphuric, nitric and mixed, Statistics	375
ACIDS	
—Charts for making mixed acids	820
—Graphic method for fortification of the spent acids used in making nitrating mixed acids, Lopez and Swanson	816
Address to Society of Chemical Industry, Sholes	704
Aëroplane construction, Metallurgy and heat treatment of metals used in, Grotte	315, 583
Aëroplane fitting investigation	127
Aëroplane parts, Typical examples of investigations	121
Agitation, Calculation of extraction in continuous, Ham and Coe	663
Aircraft work, Doping in	565
Air distribution in regenerative checkerwork, Hubbell, (P.)	45
Air Reduction Co., Sidelight on exposition	466
Ajax-Wyatt vertical-ring induction furnace	321
Ajo, Excavating tailings, Moeller	284
Alberite and oil and paper shales, Simpson	112
Alcohol	96
—Asphodel as a source	565
—Butyl, War demand	369
—Ethyl, Wood-waste as a source, Tomlinson	552
—From sulphite waste liquors, McRee, (S.)	97
—In the arts and industries, Leslie	566
—Made in Germany and Switzerland from calcium carbide	399
—Miscellaneous uses	567
—Production of denatured	566
—Review of uses	566
—Use as a fuel	566
—Wood, for motor purposes	89
Allen Property Custodian probes ownership of chemical concerns	128
Allen Property Custodian seizes Heyden Chemical Works	177
Allen property custodian seizes metal concerns	117
Alkali, Manufacture of, McElroy, (P.)	152
ALLOYS	
—Aluminium and its light, Merica	135, 200, 329, 587, 780
—Bibliography	729
—Aluminium, Constitution and properties with copper, iron, manganese, nickel, silicon and zinc	329
—Aluminium, Equilibrium diagrams	587
—Aluminium, Tests of rolled binary	588
—Ferro, Richards	501
—Ferro, in Japan	514
—Ferrous, Occluded gases in, Alleman and Darlington, (S.)	42
—For electric resistance elements, Driver, (P.)	209
—Imports of ferrous	514
—Magnesium lead, Ashcroft, (S.)	776
—Pyrophoric alloy industry, American, Hirsch	510
—Tensile properties of an aluminium-copper alloy	329
—Tensile properties of aluminium-copper-manganese alloys	331
—Tensile properties of aluminium-copper-nickel alloys	331
—Tensile properties of cast aluminium-copper-manganese alloys	330

ALLOYS—Continued:

—Tensile properties of No. 12 casting alloys	589
—Tensile properties of zinc-aluminium alloys	334
—Uses of magnesium in	624
Alsace, Sylvine deposit in	436
Alumina, Pure, From alunite, Spence and Llewellyn, (P.)	779
Aluminates from alunite, Hershman, (P.)	778
ALUMINIUM	
—Its light alloys, Merica	135, 200, 329, 587
—Bibliography	729
—Alloys, Constitution and properties with copper, iron, manganese, nickel, silicon and zinc	329
—Alloys, Equilibrium diagrams	587
—Alloys, Tests of rolled binary	588
—Chemical properties	135
—Chloride, King and Roberts, (P.)	208
—Commercial	135
—Chloride, Smith and Essex, (P.)	208
—Corrosion	136
—Corrosion, Seligman and Williams, (S.)	151
—Industrial applications	814
—In Germany, (S.)	151
—Metallurgy of	135
—Pig in the electric furnace, Remelt- ing of, Miller	251
—Price-fixing	64
—Production, Giulini, (P.)	683
—Protection against corrosion	137
—Solders, Percentage chemical composition	201
—Tensile properties	139
Aluminium-manufacturing processes used in Europe, Nissen	804
Alunite from aluminates, Hershman, (P.)	778
—From potash recovery, Chappell, (P.)	153
—Potash from, in Utah, Hornsby	461
—Potassium nitrate from, Detwiller, (P.)	779
—Pure alumina from, Spence and Llewellyn, (P.)	770
—Separation from gangue, Hagedorn, (P.)	778
Amalgamation and cyaniding, Roasting Cripple Creek ores for, Blomfield and Trott	283
American Ceramic Society Journal	488
AMERICAN CHEMICAL SOCIETY	
—Cleveland meeting	177, 543
—Dye-stuff symposium	545
—German chemists dropped from roll	543
—Potash symposium	549
American dyes from a manufacturing standpoint, Watkins	401
AMERICAN ELECTROCHEMICAL SOCIETY	
—Fall meeting	609
American independence demonstrated at Chemical Exposition	173
American Institute of Chemical Engineers	
—Meeting, Gorham, N. H.	4
American Institute of Chemical Engineering, Chicago meeting next January	803
American Institute of Mining Engineers	
—Colorado meeting	278
—September meeting in Colorado	120
American pyrophoric-alloy industry, Hirsch	510
American Smelting and Refining Company	110
American Trona Corporation, production of crude potash	427
American Zinc Institute	225
America's supremacy in electrochemistry, Tone	357
Ammonia by hydrogenation of nitrogen, Ellis, (P.)	338
Ammonia leaching, Stannard, (P.)	263
Ammonia-oxidation method as principal source of nitric acid	396
Ammonia-oxidation plants, Development of	395
Ammonia-oxidation, Starting and stability phenomena, Liljenroth	287
Ammonia sulphate, Danneel and Kuhn, (P.)	209
Ammonium phosphates, Manufacture of, Hechenbleickner, (P.)	208
Ammonium sulphate, Imports into Japan	41
Ammonium sulphate mother liquor, Pyridine from, Dodge and Rhodes, (P.)	262
Ammonium sulphate, production in Japan	41

Anaconda Copper Mining Co., Sidelight on exposition	389
ANALYSIS	
—Distillation of recovered oil	91
—Evaluation of zinc dust: A proposed method, Wilson	32
—Metallurgical, Speeding up, Parish	505
—Permeameter for general magnetic, Fahy	339
Analyzed samples wanted, Oesper	747
Annealed welds	303
Annealing atmosphere, Perry, (P.)	154
Annealing treatment and forging of steel, Development of an electric furnace for, Scott	80
Anode suspension, Gillie, (P.)	263
Antimony bounty, or a tariff	85
Antimony, Electrolytic refining of, Wong	509
Antimony smelting in China, Wang	280
Apparatus, Chloromethane manufacture, (P.)	152
Apparatus, Flotation, Flinn	168
Apparatus, Manufacture of enamel-lined, Poste	400
Arc adjustment in steel making, Moore, (P.)	48
Army, Disposition of chemists in the	227
Aromatic separation from paraffine hydrocarbons	555
Asphalt residues in 1917	140
Asphodel as a source of alcohol	565
Assets of four corporations for sale	176
Atlantic City meeting of War Service Committees	750, 798
Atlantic City, War Emergency and Reconstruction conference to be held at	703
Atomizing nozzle	211
Austria, Metallurgical practice on diamond, Stern-Rainer	721
Austrian pyrophoric alloy industry	511

B

Barnes-King Co., Fine grinding plant of, McCormick	283
Barrett Company, Sidelight on exposition	389
Bausch and Lomb metallurgical microscope	61
Bauxite deposits in Guiana	573
Bauxite, Melick, (P.)	153
Bauxite and its preparation	804
Bauxite, Production of	615
Beakers, Manufacture of	482
Beehives at Blossberg, New Mexico	579
Belgium, Restoration of	715
Belgium, Société Coopérative for	89
Belgo Canadian Pulp and Paper Co.	565
Belt dressings, Preparation of	368
Benzo, Supplies after the war	368
Bibliography of aluminium and its light alloys, Merica	729
Bibliography of electric furnace for brass melting	82
Bill, Emergency, in Congress for Federal control of power resources	226
Blast furnaces, Iron, Alkali salts from	457
Blast furnace, Purifying iron in, Gehrandt, (P.)	153
Blast furnace slag, Iron, Brick from, Shaw, (P.)	683
Bleaching materials, Germany dominated	365
Bleaching materials, U. S. A. to be self-supporting in	365
Bolivian tin profits	532
BOOK REVIEWS	
—Blair, The Chemical Analysis of Iron	49
—Cady, General Chemistry	102
—Cross, Petroleum, Asphalt and Natural Gas	214
—Directory of Engineers	642
—Demming, A Manual of Chemical Nomenclature	831
—Fertilizer Hand Book	642
—Friend, A Text Book of Inorganic Chemistry	49
—Gua and Gius-Lohm, Chemical Combination among Metals	831
—Handbook of Chemistry and Physics	785
—Hubbard, Laboratory Manual of Bituminous Materials	102
—Meade, The Chemist's Pocket Manual	102
—Mitchell, Edible Fats and Oils	214
—Moore, The History of Chemistry	158
—Olsen, Van Nostrand's Chemical Annual	102
—Partington, The Alkali Industry	214

INDEX TO VOLUME XIX

GENERAL ALPHABETICAL INDEX

Entries from the Synopsis of Periodical Literature are indicated by S. (Synopsis); from the Analysis of Current Electrochemical, Chemical and Metallurgical United States Patents by P. (Patents).

A

Abrasives, Increased production of artificial	673
Acetic acid and acetone, Industrial developments relating to the manufacture of, Hibbert	397
—Made in Germany and Switzerland from calcium carbide	399
—War demand	399
Acetone and acetic acid, Industrial developments relating to the manufacture of, Hibbert	397
—For explosives	397
—War demand	399
Acetyl cellulose, Lindsay (P.)	153
Acids (See specific head)	
Acid, Concentrating, Process and apparatus for, Hechenbleickner, (P.)	43
—Molybdc, Recovery for steel mills, Brown	274
—Lynas	274
—Removing suspended TST from spent, Johnson, (P.)	683
—Sulphuric, Excess in Britain	177
—Sulphuric, nitric and mixed, Statistics	375
ACIDS	
—Charts for making mixed acids	820
—Graphic method for fortification of the spent acids used in making nitrating mixed acids, Lopez and Swanson	816
Address to Society of Chemical Industry, Sholes	704
Aëroplane construction, Metallurgy and heat treatment of metals used in, Grotte	315, 583
Aëroplane fitting investigation	127
Aëroplane parts, Typical examples of investigations	121
Agitation, Calculation of extraction in continuous, Ham and Coe	663
Aircraft work, Doping in	565
Air distribution in regenerative checkerwork, Hubbell, (P.)	45
Air Reduction Co., Sidelight on exposition	466
Ajax-Wyatt vertical-ring induction furnace	321
Ajo, Excavating tailings, Moeller	284
Alberite and oil and paper shales, Simpson	112
Alcohol	96
—Asphodel as a source	565
—Butyl, War demand	369
—Ethyl, Wood-waste as a source, Tomlinson	552
—From sulphite waste liquors, McRee, (S.)	97
—In the arts and industries, Leslie	566
—Made in Germany and Switzerland from calcium carbide	399
—Miscellaneous uses	567
—Production of denatured	566
—Review of uses	566
—Use as a fuel	566
—Wood, for motor purposes	89
Allen Property Custodian probes ownership of chemical concerns	128
Allen Property Custodian seizes Heyden Chemical Works	177
Allen property custodian seizes metal concerns	117
Alkali, Manufacture of, McElroy, (P.)	152
ALLOYS	
—Aluminium and its light, Merica	135, 200, 329, 587, 780
—Bibliography	729
—Aluminium, Constitution and properties with copper, iron, manganese, nickel, silicon and zinc	329
—Aluminium, Equilibrium diagrams	587
—Aluminium, Tests of rolled binary	588
—Ferro, Richards	501
—Ferro, in Japan	514
—Ferrous, Occluded gases in, Alleman and Darlington, (S.)	42
—For electric resistance elements, Driver, (P.)	209
—Imports of ferrous	514
—Magnesium lead, Ashcroft, (S.)	776
—Pyrophoric alloy industry, American, Hirsch	510
—Tensile properties of an aluminium-copper alloy	329
—Tensile properties of aluminium-copper-manganese alloys	331
—Tensile properties of aluminium-copper-nickel alloys	331
—Tensile properties of cast aluminium-copper-manganese alloys	330

ALLOYS—Continued:

—Tensile properties of No. 12 casting alloys	589
—Tensile properties of zinc-aluminium alloys	334
—Uses of magnesium in	624
Alsace, Sylvine deposit in	436
Alumina, Pure, From alunite, Spence and Llewellyn, (P.)	779
Aluminates from alunite, Hershman, (P.)	778
ALUMINIUM	
—Its light alloys, Merica	135, 200, 329, 587, 780
—Bibliography	729
—Alloys, Constitution and properties with copper, iron, manganese, nickel, silicon and zinc	329
—Alloys, Equilibrium diagrams	587
—Alloys, Tests of rolled binary	588
—Chemical properties	135
—Chloride, King and Roberts, (P.)	208
—Commercial	135
—Chloride, Smith and Essex, (P.)	208
—Corrosion	136
—Corrosion, Seligman and Williams, (S.)	151
—Industrial applications	814
—In Germany, (S.)	151
—Metallurgy of	135
—Pig in the electric furnace, Remelt- ing of, Miller	251
—Price-fixing	64
—Production, Giulini, (P.)	683
—Protection against corrosion	137
—Solders, Percentage chemical composition	201
—Tensile properties	139
Aluminium-manufacturing processes used in Europe, Nissen	804
Alunite from aluminates, Hershman, (P.)	778
—From potash recovery, Chappell, (P.)	153
—Potash from, in Utah, Hornsby	461
—Potassium nitrate from, Detwiller, (P.)	779
—Pure alumina from, Spence and Llewellyn, (P.)	770
—Separation from gangue, Hagedorn, (P.)	778
Amalgamation and cyaniding, Roasting Cripple Creek ores for, Blom- field and Trott	283
American Ceramic Society Journal	488
AMERICAN CHEMICAL SOCIETY	
—Cleveland meeting	177, 543
—Dye-stuff symposium	545
—German chemists dropped from roll	543
—Potash symposium	549
American dyes from a manufacturing standpoint, Watkins	401
AMERICAN ELECTROCHEMICAL SOCIETY	
—Fall meeting	609
American independence demonstrated at Chemical Exposition	173
American Institute of Chemical Engineers	
—Meeting, Gorham, N. H.	4
American Institute of Chemical Engineering, Chicago meeting next January	803
American Institute of Mining Engineers	
—Colorado meeting	278
—September meeting in Colorado	120
American pyrophoric-alloy industry, Hirsch	510
American Smelting and Refining Company	110
American Trona Corporation, production of crude potash	427
American Zinc Institute	225
America's supremacy in electrochemistry, Tone	357
Ammonia by hydrogenation of nitrogen, Ellis, (P.)	338
Ammonia leaching, Stannard, (P.)	263
Ammonia-oxidation method as principal source of nitric acid	396
Ammonia-oxidation plants, Development of	395
Ammonia-oxidation, Starting and stability phenomena, Liljenroth	287
Ammonia sulphate, Danneel and Kuhn, (P.)	209
Ammonium phosphates, Manufacture of, Hechenbleickner, (P.)	208
Ammonium sulphate, Imports into Japan	41
Ammonium sulphate mother liquor, Pyridine from, Dodge and Rhodes, (P.)	262
Ammonium sulphate, production in Japan	41

Anaconda Copper Mining Co., Sidelight on exposition	389
ANALYSIS	
—Distillation of recovered oil	91
—Evaluation of zinc dust: A proposed method, Wilson	32
—Metallurgical, Speeding up, Parish	505
—Permeameter for general magnetic, Fahy	339
Analyzed samples wanted, Oesper	747
Annealed welds	303
Annealing atmosphere, Perry, (P.)	154
Annealing treatment and forging of steel, Development of an electric furnace for, Scott	80
Anode suspension, Gillie, (P.)	263
Antimony bounty, or a tariff	85
Antimony, Electrolytic refining of, Wong	509
Antimony smelting in China, Wang	280
Apparatus, Chloromethane manufacture, (P.)	152
Apparatus, Flotation, Flinn	168
Apparatus, Manufacture of enamel-lined, Poste	400
Arc adjustment in steel making, Moore, (P.)	48
Army, Disposition of chemists in the	227
Aromatic separation from paraffine hydrocarbons	555
Asphalt residues in 1917	140
Asphodel as a source of alcohol	565
Assets of four corporations for sale	176
Atlantic City meeting of War Service Committees	750, 798
Atlantic City, War Emergency and Reconstruction conference to be held at	703
Atomizing nozzle	211
Austria, Metallurgical practice on diamond, Stern-Rainer	721
Austrian pyrophoric alloy industry	511

B

Barnes-King Co., Fine grinding plant of, McCormick	283
Barrett Company, Sidelight on exposition	389
Bausch and Lomb metallurgical microscope	61
Bauxite deposits in Guiana	573
Bauxite, Melick, (P.)	153
Bauxite and its preparation	804
Bauxite, Production of	615
Beakers, Manufacture of	482
Beehives at Blossberg, New Mexico	579
Belgium, Restoration of	715
Belgium, Société Coopérative for	89
Belgo Canadian Pulp and Paper Co.	565
Belt dressings, Preparation of	368
Benzo, Supplies after the war	368
Bibliography of aluminium and its light alloys, Merica	729
Bibliography of electric furnace for brass melting	82
Bill, Emergency, in Congress for Federal control of power resources	226
Blast furnaces, Iron, Alkali salts from	457
Blast furnace, Purifying iron in, Gehrandt, (P.)	153
Blast furnace slag, Iron, Brick from, Shaw, (P.)	683
Bleaching materials, Germany dominated	365
Bleaching materials, U. S. A. to be self-supporting in	365
Bolivian tin profits	532
BOOK REVIEWS	
—Blair, The Chemical Analysis of Iron	49
—Cady, General Chemistry	102
—Cross, Petroleum, Asphalt and Natural Gas	214
—Directory of Engineers	642
—Demming, A Manual of Chemical Nomenclature	831
—Fertilizer Hand Book	642
—Friend, A Text Book of Inorganic Chemistry	49
—Gua and Gius-Lolind, Chemical Combination among Metals	831
—Handbook of Chemistry and Physics	785
—Hubbard, Laboratory Manual of Bituminous Materials	102
—Meade, The Chemist's Pocket Manual	102
—Mitchell, Edible Fats and Oils	214
—Moore, The History of Chemistry	158
—Olsen, Van Nostrand's Chemical Annual	102
—Partington, The Alkali Industry	214

BOOK REVIEWS—Continued:

- Pearson. Crude Rubber and Compounding Ingredients 641
—Peele. Mining Engineers' Handbook 786
—Scott. The Journal of the Institute of metals 343
—Smith. James Woodhouse 343
—Sullivan. Sulphuric Acid Handbook 343
—Whittaker. Dyeing with Coal Tar Dyestuffs 400
—Wiard. The Theory and Practice of Ore Dressing 49
Bradford flotation process 822
Brass 121
Brass melting. Bibliography of electric furnace for 82
Brass melting. Electric. Present status 682
Brass melting. Present status of electric. St. John 321
Braided joints, strength 583
Brewery converted into an oil refinery 763
Brick from iron blast furnace slag. Shaw, (P.) 683
Bricks, Brinnell ball test for the measurement of hardness 475
Brine, salt and sea-water versus reinforced concrete. Creighton 618
—Kinney 701
Britain, Sulphuric acid excess 177
British Columbia, Smelting in 606
Bronze 121
Bronze, Gases, oxides and blowholes in Admiralty. Carpenter and Elam, (S.) 337
Bronze, Structural 661
The Brown Mills, Berlin, N. H. 5
Brown process for cement and potash. Buffalo Foundry and Machine Company, Sidelight on exposition 361
Building trades, Application of zinc in. Singmaster 825
Bureau of Chemistry, Color laboratory 547
Bureau of Mines chemists transferred to the Chemical Warfare Service 229
—Gas chemists transferred to War Department 82
—Ore-dressing activities 607
—Wants trained men 41
—Work of Colorado Station 64
Bureau of Standards investigation on tin. Burgess and Woodward 600
Burner for Dwight-Lloyd roaster. Fraser (P.) 44
Burner, Fuel, Pulverized, Cram, (P.) 44
Burner, Piping for experimental pulverized coal 797
By-product, Potash as a Grasty 434
- C**
Cadmium as tin substitute in solder 662
Calcium carbide, Germany and Switzerland made alcohol and acetic acid from 399
Calcium carbide, Russell, (P.) 209
Calcium cyanide, Production in Japan 41
Calcium sulphite. Howard and Stantial, (P.) 200
Calculation of extraction in continuous agitation. Ham and Coe 663
Caliche beds found to be small in South-eastern California 199
California, Manganese in 702
—New explosives plant 607
—Prospects of a chemical industry. Koebig 27
—Quicksilver in 237
—Saline lakes, Map 425
—Southeastern, Caliche beds found to be small in 199
Callow pneumatic machine 80
Campher production and imports 9
Camps, Town planning in copper 275
Canada Carbide Co., Plant 562
Canadian Alkali Co., Plant 562
Canadian Electrode Co., Plant 562
Canadian Electro Products Company 399
Canadian Ferro-Alloys, Ltd., Plant 562
Carbide, Calcium, Russell, (P.) 209
Carbocool 580
Carbon 592
Carbon electrodes, Manufacture for electro-metallurgical purposes 179
Carbonization of coal, Savage 579
Carbon resistors, Limitations 86
Carborundum refractories 623
—Linbarger 489
Cascade paper mill 6
Catalysis, New method of preparing monomethylaniline and dimethylaniline 410
Caustic soda burns, Treatment of 293
Caustic soda, Regulations governing the sale and exportation 207
Celite Products Co., Sidelight on exposition 421
Cell, Discharge characteristics of a dry. Gillingham 610
Cell, Electrolytic, And products of the electric furnace 756
Cellulose, Acetyl. Lindsay, (P.) 153
Cement, Brown process 447
Cement construction, Portland, for chemical works. Toch 487
Cement dust, A wet process for extracting potash from. Dean 439
Cement industry, Recent developments in. Meade 471
Cement kilns, Alkali salts from 457
Census, Chemical manufacturing, Japan 41
—Of chemical industries. Scope 373
—Of chemical manufacturers 371
—Of chemists ordered by War Department 228
- Census of industries, Government agency taking 119
Ceramics, Recent developments in. Bleining 467
Cerium fluorides. Burns, (P.) 262
Chamber of Commerce of the U. S. hold reconstruction conference at Atlantic City 708
Chemical and metallurgical notes from Japan. Yasui 41
Chemical Catalog Co., Sidelight on the exposition 500
Chemical concerns ownership probed by Alien Property Custodian 128
Chemical control of water softeners. Clark 674
Chemical glassware. Sullivan 470
Chemical imports, Statistics in preparation 367
Chemical independence of the United States, An account of the first campaign 360
Chemical independence, Permanent. Herty 353
Chemical industry and the war, French 256
- CHEMICAL INDUSTRY**
—Census of manufacturers 371
—Compared with other great industries 362
—Development since 1914 546
—Economic importance. Clawson 362
—Growth from 1909 to 1914 371
—In export trade. O'Reilly 358
—Influence of gas warfare 369
—In Southern California, Prospects. Koebig 27
—Summary of progress since 1914 366
—Use of micro-organisms. Genoud 616
—War disturbances and peace readjustments. Jones 368
Chemical iron ware 520
Chemically treated fabrics for powder bags 403
Chemical manufacturers, Census 371
Chemical market, 51, 104, 160, 216, 266, 345, 595, 643, 691, 738, 788, 834
Chemical porcelain, Recent developments in the manufacture of. Bailar 484
Chemical processes, Role of colloids in. Lathe 701
Chemical questionnaire not a call to service. Breitbut 604
Chemical stoneware. Malinovsky 485
—Development of 467
—Industry and the war. Kingsbury 476
Chemical tests of metals 121
Chemical Warfare Service, Functions of Subdivisions 231
—National Army 229
—Officers and heads and divisions, List 234
—Organization chart 231
—Sidelights on exposition 361, 389
Chemical war work 545
Chemical works, Portland cement construction for. Toch 487
Chemicals, Imports and exports into and from the United States 1910 to 1918 363
—Production of general chemicals in the U. S. 364
—U. S. greatest exporter 363
Chemistry and Shipping 544
Chemistry, Advance in industrial organic since the beginning of the war. Sadler 556
—Future of pure and applied. Pope 716
—Importance in industry. Thompson 355
—Micro-organisms in plant chemistry and nitrogen fixation. Hendrick 574
—Must be commercialized 359
Chemists' Club, Honorary doctorates at. Chemists, Furloughs and deferred classification for 623
—In France 177
—In the Army, Disposition of 328
—Needed in war industries 145
—To discuss war necessities 145
—To expedite demobilization of soldier 769
—Should control the chemical industry from A to Z 359
—Soldier, Back to industry 735
—War Department orders new census of 228
- CHICAGO**
—Men unite for war work 34
Chicago meeting of the American Institute of Chemical Engineers next January 803
China, Antimony smelting in. Wang 280
Chloride, Aluminum, King and Roberts, (P.) 208
—Smith and Essex, (P.) 208
Chlorination of ores 667
Chlorine bleach curtailed, Consumption of Chlorine, Commercial uses of. Kokatnur 673
Chlorine, Electrolytic, Future of. Hooker 611
Chlorine compounds, Inorganic 668
—Organic 669
Chlorine production and distribution, Government controls 117
Chlorine water-purification plant, Mobile. Tomlin 678
Chlormethane manufacturing, apparatus for. (P.) 182
Chrome colors for war needs 410
Chrome ore, Importation 48
—Supply satisfactory, Domestic 680
Chromite, Importation 48
Chromite needed 96
- Chromium compounds of azo dyes. Bohn and Nawiasky, (P.) 44
Cinnabar, Metallurgical practice at Idria, Austria. Sterner-Rainer 721
Cinnabar operations at Monte Amiata, Italy 770
Citric acid. Horne 548
Cleveland, Dye-Stuff symposium at. Shreve 224
Climax Molybdenum Co., Flow sheet 654
Clay scratches on the ground 484
Clays, Domestic, Substituting imported with 483
Clays, German, Replacement of 467
Cleveland meeting of the American Chemical Society 543
- COAL**
—Carbonization of. Savage 579
—Distillation in a vacuum. Picotet 416
—Powdered, Possibilities as shown by its combustion characteristics. Wilcox 35
—Pulverized, Cram, (P.) 44
—Recovery of liquid products per ton 582
—Tar, Contradiction of Berthelot's theory 417
Coal ash fusibility from West Virginia coals. Selvig 826
- COALS**
—Fusibility of coal ash from West Virginia coals. Selvig 826
- COALS, POWDERED**
—For igniting D. and L. roasters 797
Coeur d'Alene sorting plant. Handy 282
Coke conservation 171
Coke oven, By-product at Gary, Ind. 579
—Improvement. Hubbell, (P.) 45
—von Bauer, (P.) 319
Coke prices reduced 314
Coke production, Japanese 381
Colloids and flotation 775
Colloids, Role in chemical processes 630
—Schwarz 701
Colorado meeting of the American Institute of Mining Engineers 278
Colorado, Mining Engineers meet in September 120
Colorado, Molybdenite in. Haley 285
Colorado Station of the Bureau of Mines, Work of 64
Combustion characteristics, Possibilities of powdered coal. Wilcox 35
Combustion engineers wanted 207
Commercial use of chlorine. Kokatnur 667
Competition, unrestricted, versus economic principles involved in public control of industry. McCrea 71
Concentration of sludge acid. Slater, (P.) 99
Concentrators, Tin-Wolfram. Miller, (S.) 261
Concrete, Influences of positive and negative ions on. Witt, (S.) 261
Concrete, Reinforced, versus salt, brine and sea-water. Creighton 618
—Kinney 701
Condensation in electric zinc smelting. Thomson 62
Congress, Emergency bill in, for Federal control of power resources 226
Conservation of technical engineers 314
Consolidated Mining and Smelting Company of Canada, Ltd. 66
Contracts, Ninety-day 607
Control equipment, Automatic 88
Conversion of a brewery into an oil refinery 753
Converter process, Side blown. Hall, (P.) 153
- COPPER**
—And its alloys in airplane construction, Uses of 315
—Camps, Town planning in 275
—Cathodes, Oxygen and sulphur in the melting of. Skowronski 279
—Converter slags. Rutherford 62
—Copper 121
—Experiments 62
—Hardness 720
—In converter slags. Lathe 700
—Industry, Japanese 308
—In insecticides, Determination of 185
—Ore importation 634
—Overpolling, Relation of sulphur to. Skowronski 279
—Porphyry, Summary 606
—Price fixing 64
—Refined at Inspiration Consolidated Copper Co. 65
—Separating nickel from. Dhavernas, (P.) 683
—Statistics 606
—Treated at Phelps Dodge Corporation 65
Corindite, A new refractory. Rigot, (S.) 684
Corn products, American 556
Corporation organized to sell enemy-owned property 119
Corrosion, breaks in reinforced concrete Corrosion of aluminum. Seligman and Williams, (S.) 151
Corrosion of lead, (S.) 151
Corrosive liquids, Valves for 212
Cost of flotation equipment 77
Cost of milling, Principal items 283
Cotton oil industry in the war. Weason 682
Cottonseed products, Statistics 383
Cottrell process for potash recovery. Bradley 457
Cottrell process in the sulphuric acid industry. Heimrod and Egbert 309

Cottrell precipitators, Typical installations	310
Cresote oil	93
Cripple Creek ores, Development of metallurgy of	748
Cripple Creek ores for amalgamation and cyaniding, Roasting, Blomfield and Trott	283
Cryolite, Refining	804
Current market reports	50, 103, 159, 214, 264, 344, 504, 642, 690, 736, 786, 834
Cyanamides, Process of producing, Thrane, (P.)	338
Cyanide imports, Japan	275
Cyanide plant, Golden Cycle	41
Cyanide solutions, Effects of oxygen on precipitation of metals from	796
Crowe	283
Clevenger	604
Watts	652
Cyaniding and amalgamation, Roasting Cripple Creek ores for, Blomfield and Trott	283

D

Decision, Recent flotation, Choate	60
Dehydrogenation of petroleum oils, Ramage, (S.)	777
Demobilization of soldier chemists, To expedite	769
Denver, U. S. Tariff Commission holds hearings on tungsten at	11
Deoxidizer of titanium and silicon, Pettinot, (P.)	99
Depolarizer, Manganese dioxide, Ellis and Wells, (P.)	208
Derecination of rubber, King	141, 203
Design and operation, Flotation apparatus, Fahrenwald	77, 129
Detinning scrap	825
Dimethylaniline and monomethyl by catalysis, New method of preparing	410
Dioxide, Manganese, Depolarizer, Ellis and Wells, (P.)	208
Distillation of coal in a vacuum, Pictet	415
Distillation of oil shales, Destructive, Morrell and Ergoff	90
Distillation of wood tar, Palmer, (P.)	150
Distribution of Niagara power	120
Doctorates, Honorary, At the Chemists' Club	605
Doors, Furnace, Hydraulic operation	156
Draftsmen for war work needed by Government	172
Drives, Two, one of them here	571
Drums, Steel, Removing plugs, Boyd	605
Drying system for liquids	48
du Pont Company, Organic synthesis and, Reese and Stine	569
du Pont de Nemours & Company, E. I., Sidelight on exposition	466
Duralumin	635
Dwight-Lloyd roaster, Burner for, Fraser, (P.)	44
Dye industry, Safe-guarding, Matthews	800
Dye industry, Situation in, Nichols	800
DYES:	
—American from a manufacturing standpoint, Watkins	401
—Analysis of United States' needs	401
—Chromium compounds of Azo, Bohn and Nawiasky, (P.)	44
—Curtailling of imports affects industry	369
—Domestic shortage relieved	559
—Dyes from the manufacturers' standpoint, Matos	409
—Great development in industry	559
—Indigo and alizarine produced in the U. S.	409
—Industry and the tariff	546
—Jellies formed by	414
—Manufacture, American progress	545
—Problems in testing	547
—Production at present	402
—Progress in natural dyes	546
—Quality of domestic product equal to imported	402, 410
—Universal soap, Huffman, (P.)	778
DYESTUFFS:	
—Our expanding industry	10
—Quantitative analysis	547
—Revival of industry	364
—Statistics	379
—Symposium	545
—Symposium at Cleveland, Shreve	224

E

Economic importance of our chemical industry, Clawson	362
Economic position of oil shales, Morrell and Ergoff	113
Economic principles involved in public control of industry versus unrestricted competition, McCrea	71
EDITORIALS:	
—A call to save paper	602
—Administering alien property	58
—A grinding problem that crushed an editor	744
—American clays and ceramics	463
—Are you a good American?	537
—Basic eight-hour day in steel industry	539
—Buying a scientific pig in a poke	57
—Change in meeting of Electrochemical Society	373
—Chemical and Metallurgical Engineering	1

EDITORIALS—Continued:

—The Chemical exposition and our daily service	351
—Chemical exposition to be held this month	222
—Chemistry in modern warfare	222
—Coke, pig iron and transportation	603
—Commercial bribery—Trade Commission acts	698
—Deterioration of reinforced concrete	602
—The development of water softening	651
—Devil-Hounds and Hounding the Devil	3
—Distinguishing between essentials and non-essentials	221
—Economics in the works	464
—Economics of prices and production in war time	57
—Employment managers and the wage earners	609
—Engineers needed for engineering faculties	744
—The evaporation of weak liquors	420
—The exhibit of the Ceramic Section	463
—Flexibility of the steel industry	111
—The Fourth Liberty Loan and victory	601
—Fourth Liberty Loan to be a victory loan	221
—Germany's finger in the platinum pie	166, 222, 602
—Germany in the melting pot	497
—Glory of the peasant	746
—Gold mining an essential industry	222
—Help for the gold producer	650
—Increasing production of American-made potash	419
—Increasing production of by-product coke	167
—Inscrutable in the ultimate	650
—Iron contents of iron ores	223
—Jealousy among the mighty	538
—Labor and machinery in iron industry	745
—Lack of life in the Rubber Section	537
—Making blast furnaces and steel works fit	697
—Match your patriotism against the National Army men	165
—Miss Liberty is on the wire	271
—Nec timeo nec sperno	387
—On the price of gold and other things	3
—Our preeminence in metal production	498
—Ourselves	1
—Outlook for German competition in potash	420
—Platinum, rice and war weddings	109
—Post-war problems in the chemical industry	58
—Profits and profiteering	59
—Pure and applied chemistry in England	699
—A reconstruction commission should be appointed immediately	601
—Reconstruction Conference to be held at Atlantic City	743
—Rehabilitating wounded and crippled soldiers	272
—Science and the German language	110
—September's conventions	109
—Ship losses and ship construction	273
—Smith-Howard bill and industry's opportunity	794
—Speaking of lead, who pays the freight?	2
—Stability of first importance for industry	793
—Steel Consumption and investment	795
—That missing page from the blue-back speller	794
—Statistics of the chemical industry	352
—Steel conditions after the war	649
—Sulphuric acid, martial indicator	388
—Talking too much at the wrong time	538
—Test iron ores and fluxes for potash	110
—Victory over might	697
—Wanted: Information on blast-furnace smelting	272
—Wanted: Public appreciation of the chemical industry	352
—War Minerals Bill ready for signature	498
—What does the employer expect of the college-trained chemist?	58
—Win-the-War meetings for Fourth Liberty Loan	271
Education, Industrial Established by Ordnance Department	403
Electrical controlling pyrometer	210
Electric arc presses, nitric acid by, Scott	610
Electric brass melting, present status	682
—St. John	321
Electric energy usage	120
Electric power, cost if produced from lignite	29
Electric resistance annealing furnace	88
Electric resistance elements, Alloy for, Driver, (P.)	209
Electric steel expansion, discouraged by the War Industries Board	171
Electric steel, Triplex process, Robinson	15
Electric welds, Thum	301
Electric zinc smelting, Condensation, Thomson	62
Electrochemical industries after the war	609
Electrochemical industries at Shawinigan Falls, Randall	561
Electrochemical industries increased allotments of power, Niagara Falls-Buffalo district	120

Electrochemical industry, Post-war problems	69
Electrochemical industries, Tariff problems, Jones	614
Electrochemistry, America's supremacy in, Tone	357
Electrochemistry and metallurgy, Future of, On the Pacific Coast, Beckman	30
Electrodes, Bibliography and literature	179
Electrodes, Carbon, Manufacture for electro-metallurgical purposes	179
—Construction, Herreshoff, (P.)	338
—In use by different countries	179
—Manufacture of raw materials	179
—Methods of mixing and firing	179
—Testing finished products	179
Electrodes for electric furnaces	804
Electrolysis of lock valves at Panama, Whitehead, (S.)	684
Electrolytes, Role of complex salts in plating and refining baths, Dean and Chang	83
Electrolytic cell, Products of the electric furnace and the	756
Electrolytic nickel, Thick deposit	640
Electrolytic refining of antimony, Wong	509
Electrolytic starting sheet, Montgomery and Tobelmann, (P.)	263
Electrolytic zinc, (See zinc)	
Electrolytic zinc, Hansen	279
Electrometallurgical purposes, The manufacture of carbon electrodes for	179
Electrometallurgy, Future of on the Pacific Coast, Beckman	30
Electroplating military application, Blum	610
Electrostatic precipitation, Lyon	285
Ellison gase and fittings, Sketch of	250
Employment manager, Who and what is, Clayton	727
Enamel-lined apparatus, Manufacture of, Poste	400
Enemy patent licenses issued by Federal Trade Commission	227
Enemy patents, Licenses to	767
Enemy technical periodicals available	517
Engineers, Combustion, wanted	207
Engineers, Conservation of technical	314
Engineers, Licensing of	157
Europe, Aluminum-manufacturing processes used in, Nielsen	804
Evaluation of zinc dust, Wilson	274
Evaporation, Swenson system	633
Exchange bodies, Process of making, Rudolf, (P.)	152
Exhibitors, From A to Z	391, 422, 493
Explosives, Acetone for	397
Explosives plant for California	607
Explosives, Statistics	380
Exportation of caustic soda, Regulations governing	207
Exporters of chemicals, United States the greatest	363
Exports of chemicals from the U. S. from 1910 to 1918	363
Export trade, The chemical industry in, O'Reilly	358
Exposition sidelights, 361, 389, 421, 465	500
Extraction in continuous agitation, Calculation of, Ham and Coe	663
Extractor, Continuous roaster, Greenawald, (P.)	779

F

Fabrics, Chemically treated, for powder base	403
Federal control of power resources, Emergency bill in Congress for	226
Federal regulation of common and skilled labor	174
Federal Reserve Board, Warburg	799
Federal supervision of Niagara Falls power	70
Feldspar, Soluble potash from	433
Fernbach process, Fermentation of starch	398
Ferro Alloy Co. plant	278
Ferro-alloys, Richards	501
—In Japan	514
—In the electric furnace, Manufacture of, Keeney	281
Ferromanganese furnace, Size vs. recoveries in, Bardwell	749
Ferromanganese industry development in the United States since 1914, Swann	672
Ferromanganese on the Coast	702
Ferrotungsten, Cost of manufacture	11
Ferro-uranium, Radio-photograph	615
Fertilizer industry, War disturbances	370
Fertilizer movements, Dislocation in	365
Fertilizer Statistics	380
Filter process, Washing in, Sperry	680
Filter, World's leading, in exhibition	550
Flinn-Towne machine	81
FLOTATION:	
Flotation and colloids	775
—Apparatus, Flinn	168
—Apparatus, Their design and operation, Fahrenwald	77, 129
—Cole-Bergman machine	129
—Collective and preferential, Riddell	822
—Cost of machines	134
—Decision, Recent, Choate	60
—Gravity frothing machine	131
—Inspiration machine	129
—Launder machine	130
—Ore, Molecular physics of, Coghill	168
—Van Arsdale	60
—Pneumatic machines	80
—Prior art, Conforming to, Canby	113
—Results obtained by Terry differential process	320
—Terry differential process	319

INDEX.

V

Fluxes, Potash from. Porter.....	462
Foreign competition in quicksilver.....	237
Foreign trade, Establishing credit system and. Farrell.....	798
Formula, Mathematical, For continuous systems of extraction in hydrometallurgy and industrial chemistry. Ham and Coe.....	603
Fourth National Exposition of Chemical Industries.....	68
—All in readiness.....	342
—Opening exercises.....	353
—Program.....	276, 361, 391
—To demonstrate American independence.....	173
France, Chemists in.....	177
French chemical industry and the war.....	286
Frothing machines, Mechanical-air.....	79
Frothing machine, Straight mechanical.....	77
Fuel burner, Pulverized. Cram. (P.).....	44
Fuel distribution, Plans for preferential fuel introduction through tuyeres. Cavers. (P.).....	779
Fuel situation, Booth. (S.).....	97
Fuller's earth in 1917.....	683
Furnace, Blast, Slag control by means of slag viscosity tables. Field.....	294
Furnace, Cermak.....	722
FURNACE, ELECTRIC:	
—After the war. FitzGerald.....	611
—Application to the melting of brass and other copper alloys.....	321
—Arc adjustment in steel making. Moore. (P.).....	45
—Bailey indirect resistance.....	324
—Bibliography for brass melting.....	82
—Combination arc and resistance furnace.....	325
—Development for annealing treatment and forging of steel. Scott.....	86
—Direct-heating arc furnace.....	322
—Electrodes for.....	804
—Ferro-silicon.....	115
—Forging furnace, Advantages.....	89
—For nitrogen fixation.....	710, 757
—Frazer Brace Co's plant.....	563
—Fulton's.....	62
—Helberger resistance furnace.....	326
—Heroult, Triplex process of making electric steel.....	15
—Hoskins.....	123
—Hoskins crucible.....	327
—Indirect.....	323
—Iron and steel manufacture, Processes. Humbert (P.).....	46
—Kilburn Scott three-phase arc.....	710, 757
—Manufacture of ferro-alloys. Keeney.....	381
—Manufacturers confer on war problems.....	226
—Melter's, and accessories.....	826
—New furnaces in Sweden.....	226
—Northrup-Ajax high-frequency induction.....	155
—Northrup furnace in operation.....	615
—Northrup high-frequency furnace.....	615
—Products, and the electrolytic cell.....	756
—Remelting of aluminium pig. Miller.....	251
—Size vs. recoveries in ferro-manganese. Bardwell.....	749
—Tapping type of stationary furnace.....	251
FURNACES; MISCELLANEOUS:	
—Experimental, Design and test.....	87
—Ferrochromium, Slags produced.....	46
—Becket (P.).....	88
—Fuel-fires for forging, disadvantages.....	724
—Kroupa.....	238
—Mercury.....	655
—Retort.....	239
—Rotary quicksilver, at New Idria.....	238
—Scott.....	46
—Tilting, steel manufacture. McDonald. (P.).....	208
—Fuse, Silica filler. Arsen and Wright. (P.).....	826
—Fusibility of coal ash from West Virginia coals. Selvig.....	

G

Gangue, Separation of alunite from. Hagedorn (P.).....	778
Gas analysis with very small quantities.....	390
—Burner, Direct determination of sulphur dioxide. Williams.....	390
—Chemists of Bureau of Mines transferred to War Department.....	82
—Hydrogen constituent, Allemen & Darlington. (S.).....	42
—Illuminating and heating, Statistics.....	382
—In coke oven (P.).....	45
—Masks.....	707
—Meter, Thomas.....	210
—Natural, Volume of.....	414
—Occluded in ferrous alloys. Allemen and Darlington (S.).....	42
—Producer, Charging tar in.....	560
—Producer, Combustion of. Haas-roder (S.).....	213
—Quantitative determination of suspended tarry matter in. Steero.....	686
—Rivet heaters.....	213
—Used in warfare.....	150
Gas warfare, both offensive and defensive.....	705
—Influence on chemical industry.....	369
—Research. Bancroft.....	544
Gasoline, Gilsonite shales and. Relfoff and Moore.....	548
Gasoline recovery from natural gas.....	49
General Electric Co., Sidelight on the exposition.....	500
Georgia, Sulphuric acid and sulphur monopoly.....	173

German chemists dropped from roll of American Chemical Society.....	543
German clays, replacement of.....	467
German industry and the war.....	359
German Institute for Metallurgical Research.....	10
German language, science and.....	274
German production of potash, Statistics.....	300
German sugar production.....	555
Germany, Absent "C" in.....	475
—Aluminium in. (S.).....	151
—dominated world market for bleaching materials.....	365
—makes alcohol and acetic acid from calcium carbide.....	399
—Potash industry. Savage.....	453
—Potassium salts in.....	456
—Soap substitutes.....	578
—Utilization of reclaimed rubber in.....	578
Germany's finger in the platinum pie.....	224
—Baker & Co., Inc.....	224
—Johnson Matthew & Co., Ltd.....	604
Glass, Annealing of.....	474
—Comparison of foreign and domestic.....	470
—Direct etchings on.....	478
—Manufacture, Optical, Success in.....	467
—Optical, Government controls importation.....	666
—Growth from 1914 to 1918.....	479
—Home-made. Howe.....	479
—Limitations.....	479
—Military demand.....	481
—Obstacles to be overcome.....	481
—Porcelain pots for melting.....	47
—Review of progress.....	481
Glassware, Chemical. Sullivan.....	470
Glassware, Industrial. Scholes.....	482
—Manufacture of beakers.....	482
Glycerine and oils for explosives.....	558
Glycerine, Study of synthetic.....	569
Glycols, Manufacture of. Hibbert.....	571
Gold exports.....	34, 76
Gold, Imports of.....	320
Golden Cycle cyanide plant.....	796
Goldfield Consolidated Mines Co.....	96
Gold producer, Help for. LeSueur.....	747
Gold-recovery processes. Sharwood.....	63
Gold-recovery processes practised by the early Portuguese and Spaniards.....	653
Jordan.....	119
Government agency taking census of industries.....	613
—and the technical man after the war.....	34
Lidbury.....	117
—badly needs trained men.....	70
—controls chlorine production and distribution.....	606
—control of sulphur-bearing materials.....	172
—controls the importation of optical glass.....	366
—needs thousands of draftsmen for war work.....	48
—powder plant at Nashville, Fire-hundred-ton.....	8
—powder plants completed ahead of schedule.....	157
—restricts location of new industries.....	816
Grading solids, Developments in.....	116
Graphic method for fortification of the spent acids used in making nitrating mixed acids. Lopez and Swanson.....	488
Graphite crucibles placed on list of restricted imports.....	775
Graphite supplies for 1918.....	69
Graselli prize.....	815
Great Britain, Handling post-war questions.....	542
Great Britain, Industrial reconstruction.....	666
Great Falls rod mill commences operations.....	283
Grenades, Production of hand.....	284
Grinding plant of the Barnes-King Co. McCormick.....	203
Grinding resistance of various ores. Lennox.....	573
Guayule, Desamination of.....	
—Plant for producing.....	
Guiana, Bauxite deposits in.....	

H

Hackl periodic system of radio-active isotopes.....	751
Harvard Medical School, Instruction and research in industrial hygiene.....	119
Heaters, Gas rivet.....	212
Heat treatment and metallography of metals used in aeroplane construction. Grotts.....	121, 191, 241, 315, 583
Heating, Practical oil circulating system for indirect.....	733
Hecla Company's ore-sorting plant.....	283
Heroult electric furnaces, Triplex process of making electric steel. Robinson.....	15
Heyden Chemical Works seized by the Alien Property Custodian.....	177
Hoiat, Lewis hydraulic.....	157
Honey, Artificial.....	588
Housing at Tyrone, New Mexico. Willis.....	627
Human element in the mill.....	146
Humus mining.....	575
Hydraulic operation of furnace doors.....	156
Hydrocarbons, Aromatic.....	92
Hydrocarbons, Unsaturated.....	91
Hydro-electric power project, Work suspended at Muscle Shoals.....	225
Hydrofluosilicic acid manufacture. Hechenbleickner. (P.).....	99
Hydrogen, Largest constituent of gas.....	42
—Allemen and Darlington. (S.).....	209
Hydrosulphite, Sodium. Grunder. (P.).....	

I

Illinois Steel Co., Triplex process of making electric steel. Robinson.....	15
Illuminator, A new. Burrows and Caldwell. (S.).....	336
Ilsemanite, Historical constitution of.....	186
Ilsemanite, Yancey.....	186
Importation of copper ore.....	634
—of magnesite and manganese, Rulings on.....	150
—of optical glasses controlled by the Government.....	666
Imports of chemicals into the U. S. from 1910 to 1918.....	363
—Chemical statistics in preparation.....	367
—Control of tin.....	625
—Restricted, Graphite crucibles.....	116
—of rubber to January 1, 1919.....	623
Indigo industry, Natural.....	418
Indigo, Synthetic, Problem of large-scale production.....	570
Induction furnace, Northrup-Ajax high-frequency.....	155
Industrial developments relating to the manufacture of acetic acid and acetone. Hibbert.....	397
Industrial education section established by Ordnance Department.....	403
Industrial hygiene at the Harvard Medical School, Instruction and research in.....	119
Industrial News.....	54, 107, 163, 219, 269, 348, 599, 647, 695, 741, 791, 837
Industrial reconstruction in Great Britain.....	815
Industrial research, Developments in.....	197
Industries, Government restricts location of new.....	8
Industries, Skilled enlisted men to be returned to.....	134
Insecticides, Copper in. Determination of Inspiration Consolidated Copper Company.....	185
Instruments, Optical, Need of in industrial laboratories. Shook.....	224
Iron, Cast.....	121
Iron, Pig, Conservation.....	171
Iron, Sponge, Sinding-Larsen. (P.).....	154
—Westberg. (P.).....	98
IRON AND STEEL:	
—Arc adjustment in steel making. Moore. (P.).....	45
—blast furnace slag, Brick from. Shaw. (P.).....	683
—Chrome-nickel steel.....	195
—Conservation.....	171
—Electric pig after the war. Turnbull.....	612
—Electric steel, Triplex process. Robinson.....	15
—Hardness of ingot.....	720
—High-carbon steel.....	193
—Iron.....	592
—Iron compounds at extremely high temperatures. Behavior.....	720
—Iron ores, Potash from. Porter.....	462
—Iron purifying in a blast furnace. Gehrandt. (P.).....	153
—Iron that can be whittled with a jackknife.....	610
—Iron ware, Chemical.....	520
—Magnetic permeability of steel. Fahy.....	247
—Manufacture of wrought iron. Ashton. (P.).....	98
—Nickel steel, Properties of.....	242
—Prices fixed for three months.....	12
—Properties of chrome-vanadium steel.....	241
—Properties of chromium steel.....	246
—Properties of medium carbon steel.....	191
—Processes for manufacture. Humbert. (P.).....	46
—Tungsten steel.....	246
—Vanadium steel.....	246
—War Industries Board discourages further expansion of electric steel.....	171
Iron and steel market.....	51, 103, 149, 215, 265, 344, 594, 643, 690, 737, 787, 832, 278
Iron Mountain Alloy Co. plant.....	421
Irving National Bank, Sidelight on exposition.....	770
Italy, Quicksilver operations at Monte Amiata. Sterner-Rainer.....	

J

Janney mechanical-air machine.....	79
Japan, Chemical and metallurgical notes from. Yasui.....	41
Japan, Ferro alloys in.....	514
Japanese coke production.....	314
Japanese copper industry.....	308
Joplin ore-sorting.....	283
Journal of the American Ceramic Society.....	488
Judge Mining and Smelting Co.....	66

K

Kali and potash.....	452
Kelp, Extraction of potash from. Higgins.....	432
Kelp-potash plant of the Lorned Manufacturing Co. Thompson.....	450
Kelp, Methods of harvesting.....	432
—Products chart.....	433
Kiln, Swiss, For deadburning magnesite. Steiger and Frey. (S.).....	685

Kjellin refining furnace, Operation and repair. Knapp. (P.).....	208
Kollberg-Kraut machine	79
Koppers Company stock for sale.....	177

L

Laboratory, Analytical	101
—Arrangement for metallurgical analysis	505
—for industrial research	100
—Industrial, Need of optical instruments in. Shook.....	224
—Refractory tube made in. Bailar.....	605
—retort, Built-in. Coombs.....	655
—Speeding up the steel works. Kimmer	512
Labor, Common and skilled, Federal regulation of	174
Labor, Effects of price-bidding. McCrea	71
Leaching process. Anderson. (P.)....	262

LEAD:

—arsenate. Lihme. (P.).....	209
—cadmium solder	170
—cadmium-tin solder	170
—cadmium-zinc solder	170
—concentrates, Produced, Judge Mining and Smelting Co.....	66
—Corrosion of. (S.).....	151
—market, Canadian	66
—prices in New York.....	509
Leather, Production of artificial.....	570
Leeds and Northrup transition-point apparatus	84
Lewis hydraulic hoist.....	157
Liberty Bonds, American Electrochemical Society invests in.....	611
Licenses to enemy patents.....	767
Licensing of engineers.....	157
Lignin from sulphite waste liquors. Streblener. (S.).....	213
Lignite, By-products from coking.....	29
Lime, Neutralizing value of	574
Limestone, Quantity sold.....	128
Liquids, A new drying system.....	48
Literature on the potash industry, 1912-1917. Bruckmiller	447
Little, Arthur D., Inc., laboratory for industrial research	100
Load, Safe on I-beam by rule of thumb. Carpenter.	821
London, Monthly average price of tin in Lorned Manufacturing Company, Kelp-potash plant. Thompson.....	450

M

Magnesite, Rulings on importation.....	150
Magnesite, Swiss kiln for deadburning. Steiger and Frey. (S.).....	685
Magnesium	525
Magnesium industry, Development of. Waldo	624
Magnesium lead alloys. Ashcroft. (S.)	776
Magnetic permeability of steel. Fahy.....	247
Manganese in California.....	702
—conservation	171
—dioxide depolarizer. Ellis and Wells. (P.)	208
—Rulings on importation.....	150
—steel rails. Wickhorst. (S.).....	97
—Supplies, Sources	672
Manufacture of ammonium phosphates. Hechenbleikner. (P.).....	208
Manufacture of carbon electrodes for electro-metallurgical purposes.....	179
Manufacturers, Electric furnace, Confer on war problems.....	226
Manufacturers' standpoint, Dyes from the. Matos	409
Manufacturing standpoint, American dyes from. Watkins	401
Marketa, Non-ferrous, Iron and steel and chemical. 50, 103, 159, 214, 264, 344, 594, 642, 690, 736, 786.....	832
Maska, Gas	707
Matches, Import from Japan.....	41
Mercury furnaces	238
Mercury imports, Japan.....	41
Mesothorium	64
Metal concerns seized by Alien Property Custodian	117
Metal industries, War-profile in.....	275
Metallography and heat treatment of metals used in aeroplane construction. Grotts.....	121, 191, 241, 315, 583
Metallography of the war. Jeffries.....	518
Metallography of tungsten. Jeffries.....	280
Metallurgical analysis, Speeding up. Pariah	505
—matters, Ordnance Board on.....	226
—notes from Japan. Yasui.....	41
—practice on cinnabar at Idria, Austria. Sterner-Rainer.....	721
—research, German institute for	10
Metallurgy development of the Cripple Creek ores	748
Metallurgy of zinc. Hastings.....	114
Metallurgy, Zinc	169
Metal products of the American Smelting and Refining Company.....	116
Metals, Anti-friction and bell. Waring.....	657
—Cleaning. Morey and Huber. (P.)	209
—Copper-base-bearing. Clamer	656
—Effect of oxygen on the precipitation. From cyanide solutions. Watts	652
—Metallography and heat treatment used in aeroplane construction. Grotts.....	121, 191, 241, 315, 583

Metals, Precipitation of. From cyanide solutions, Effects of oxygen on. Crowe.....	283
—Standard grades of babbit.....	661
—Ulco hard. Frary and Temple.....	523
Meter, Gas. Thomas.....	210
Micro-organisms in plant chemistry and nitrogen fixation. Hendrick.....	574
Micro-organisms, Use of, in chemical industry. Genoud	616
Microphotographs of metals.....	124
Microscope illumination, A new method of. Silverman	508
Microscope in ore-dressing. Clayton.....	61
Mill feed, Hand-sorting of. Handy.....	282
Mill, Human element in.....	146
Minerals separation sub-aeration machine	79
Mining engineers meet in Colorado in September	120
Mobile chlorine water-purification plant. Tomlin	678
Molecular physics of ore flotation. Coghill	168
—Van Arsdale	60
Molybdenite in Colorado. Haley.....	285
Molybdenum	654
Molybdenum compound	186
Molybdenum steel. Batcheller. (S.).....	151
Molybdic acid for steel mills, Recovery of. Brown	274
Molybdic acid for steel mills, Recovery of. Lynas	274
Molybdic acid recovery for steel mills. Lynas	169
Monochlorobenzol, War baby.....	368
Monomethyl aniline and dimethylamine by catalysis, New method of preparing	410
Muscle Shoals, Work suspended on hydro-electric power project.....	225

N

Nashville, Give hundred-ton Government powder plant at.....	366
National Aniline & Chemical Co., Side-light on exposition.....	466
National Army, Chemical Warfare Service	229
National Exposition of Chemical Industries	68
—All in readiness	342
—Opening exercises	353
—Program	276, 361, 391
—to demonstrate American independence	173
National Gun & Mica Co., Sidelight on exposition	421
National Potash Company's plant destroyed	702
National Research Council.....	335
Natural Gas, Gasoline recovery.....	40
Nebraska, Potash in. Litteras.....	633
New Cornelia excavating tailings at Ajo. Moeller.....	284
New Idria mill flow-sheet.....	237
New Idria, Quicksilver concentration at. New Jersey Zinc Co., Sidelight on exposition	421
New Mexico, Housing at Tyrone. Willis. Newport Chemical Works, Inc., Sidelight on exposition.....	627
Niagara Falls power, Federal supervision	465
Niagara power distribution.....	70
Nickel separated from copper. Dhavernas. (P.)	120
Nickel, Thick deposit of electrolytic.....	683
Nitrate Committee, First.....	640
Nitrates, Natural and artificial.....	360
Nitrate, Potassium, From alunite. Detwiller. (P.)	366
Nitrating mixed acids, Graphic method for fortification of the spent acids used in making. Lopes and Swanson	779
Nitre cake, Sodium sulphide and other products from. Bassett.....	816
Nitric acid, recovery. Hechenbleikner. (P.)	709
Nitric and sulphuric acid prices.....	43
Nitric acid by the electric arc processes. Scott.....	571
Nitric acid increase in production since war began	610
—Industry	395
—Manufacture development in the United States since 1914.....	368
—President approves maximum prices.....	395
—Prices	625
Nitrogen, Ammonia by hydrogenation of. Ellis. (P.)	615
Compounds, Heterocyclic.....	338
Consumption in the U. S. in 1914.....	93
Fixation, Direct and indirect methods. Scott.....	829
Fixation furnaces. Scott.....	411
Fixation, Micro-organisms in plant chemistry and the war. Landis.....	757
Industry and the war. Landis.....	574
Production of. Andreucci. (P.).....	828
Nitrogen statistics. United States.....	338
Non-Ferrous Metal Market, 50, 103, 159, 214, 264, 344, 594, 642, 690, 736, 786.....	829
Northern Aluminum Co., Ltd., Plant.....	736, 786, 834
Northrup-Ajax high-frequency induction furnace.....	502
Northrup high-frequency induction furnace. Northrup.....	155
Nossie, Atomizing.....	615
.....	211

O

Occupations, Productive, Classification by War Department.....	70
Odors, Measurement of. Katz and Allison.....	747
—Measuring. Gottschalk.....	700
—Standardizing, and stencches. Allison and Katz.....	549
Oil (See also petroleum)	
Oil circulating system for indirect heating.....	733
—Cotton oil industry in the war. Wesson	652
—Dehydrogenation of petroleum. Ramage. (S.)	777
—Essential. Statistics.....	383
—For explosives.....	558
—Hydrogenation.....	6
—Hydrogenation gives added value.....	558
—Increase in production and importation.....	558
—Magnitude of the petroleum and oil industries	556
—Per cent used in flotation.....	60
—Recovered. Distillation analysis.....	91
—Refinery, Brewery converted into an. Shales, albertite and paper shales. Simpson.....	753
—Shales, Economic position. Morrell and Egloff.....	112
—Shale retorted, Products recovered on basic ion.....	95
—Shales, Destructive distillation. Morrell and Egloff.....	90
—War's effect on cottonseed.....	548
Operation and design, Flotation apparatus. Fahrenwald	77, 129
Optical glass, Government control importation.....	666
—Home-made. Howe.....	479
—Porcelain pots for melting.....	47
Optical instruments, Need of in industrial laboratories. Shook.....	224
Ordnance Board on metallurgical matters.....	226
Ordnance department establishes industrial education section.....	403
Ores, Agglomerating oxidized. Dwight. (P.)	44
—Chrome, Importation.....	48
—Cooling, moistening and feeding table. Richards. (P.)	46
—Cripple Creek, Development of metallurgy of.....	748
—Dressing activities of the Bureau of Mines.....	607
—Dressing, Microscope in. Clayton.....	61
—Flotation, Molecular physics of. Coghill.....	168
—Van Arsdale	60
—Grinding resistance of various. Lennox.....	284
—Mined, Inspiration Consolidated Copper Company.....	65
—Treated, Goldfield Consolidated Mines Co.....	66
—Treated, Judge Mining and Smelting Co.....	66
Organic chlorides, Manufacture of. McKiray. (P.)	152
Organic reagents for research purpose. Herl.....	274
Organization of the Chemical Warfare Service.....	229
Oven, Coke, von Bauer. (P.)	45
Oxyacetylene welds, Strength of. Moore. (S.)	536
Oxygen and sulphur in the melting of copper cathodes. Skowronski.....	279
Oxygen, Effect on the precipitation of metals from cyanide solutions. Watts.....	653
—Clevenger on precipitation of metals from cyanide solutions. Effect of. Crowe.....	604
.....	283

P

Pacific Coast, Future of electrochemistry and metallurgy. Beckman.....	39
Pacific Electro Metals Company.....	115
Paint and varnish statistics.....	384
Paint, Discoloration of white. Twiss. (S.)	213
Paint thinning calculations.....	260
Panama, Electrolysis of lock valves at. Whitehead. (S.)	684
Patents, Licenses to enemy.....	767
Patent Office needs technically trained persons.....	207
Patents, Recent chemical and metallurgical, 43, 68, 152, 208, 262, 338.....	683, 778
Percarbonates, Production. Liebknecht. (P.)	43
Perechloric acid use as a substitute for platinum in potash analysis.....	608
Periodicals available, Enemy technical. Permeameter for general magnetic analysis. Fahy.....	517
—Fahy.....	339
—Simplex.....	247
Permutite, Basic exchange in.....	339
Petroleum oils, Dehydrogenation. Ramage. (S.)	671
—Residues in 1917.....	777
—Statistics.....	140
Phelps Dodge Corporation.....	385
—Housing at Tyrone, New Mexico.....	65
Phenols.....	627
—From mono-brom-benzol.....	93
Phenols, Synthetic.....	551
.....	634

PHENOLS, SYNTHETIC—Continued:

Correction	277
Description of old processes	255
Flow sheet of Dennis-Bull process	255
Holston	540
Peterkin	255
Phosphate, Yellow, Import from Japan	41
Phosphates, Ammonium, Manufacture of, Hechenbleckner, (P.)	208
Phosphoric acid manufacture, Hechenbleckner, (P.)	99
Phosphorus	592
Phosphorus, Ferro, Webster, (P.)	154
Phosphorus from molten slag, Wenman, (P.)	263
Physical tests of metals	121
Physics, Molecular, of ore flotation, Coghill	168
Van Arsdale	60
Pitot tube connection, Improved	250
Pitot-tube measurement, Notes on the use of the pressure gage for, Anderson	250
Planta, War Department authorizes construction of	623
Plating baths, Role of complex salts as electrolytes in, Dean and Chang	83
Platinum	286
As seen by the jeweler and the chemist	118
Dishes, One hundred dollars reward for return	735
Ingot, First veritable	197
Perchloric acid used as a substitute in potash analysis	608
Pie, Germany's finger in, Baker & Co., Inc.	224
Engelhard	224
Johnson Matthey & Co., Ltd.	604
Released	761
Stringent regulations on	607
Plugs, Removing from steel drums, Bord	605
Plumbago conservation	171
Porcelain, Chemical, Recent development in the manufacture of, Bailar	484
Development of	467
Pots, Composition	47
Pots for the melting of optical glass	47
Porphyry coppers summary	606
Portuguese, Special gold-recovery processes practiced, Jordan	653
Portland cement construction for chemical works, Toch	487
Portland Gold Mining Company	542
Post-war problems of the electrochemical industry	69
Post-war questions, How Great Britain is handling	69

POTASH:

Analysis, Perchloric acid used as a substitute for platinum	608
And kail	452
As a by-product, Grady	434
Bibliography	448
Brown process	447
Collectors, Zeolites as	431
Cost of collecting	437
Electrical precipitation	446
Estimated results of Cottrell electric precipitator installed at a 200-ton iron blast furnace	437
Experimental distillation	439
Extraction by wet process from cement dust, Dean	439
From alunite in Utah, Hornsey	461
From Georgia cambrian slates	459
From iron ores and fluxes, Porter	462
From kelp, Extraction of, Higgins	432
From Searles Lake, deKopp	425
Future production	446
General layout of kiln building	450
German production statistics	300
Humidifying process	439
Industry of Germany, Savage	453
In 1917	542
Iron blast-furnaces as a source	435
Kelp-potash plant of the Lorned Manufacturing Co., Thompson	450
Literature, Bruckmiller	447
In Nebraska, Litteras	633
Production, United States, 1917	434
Recovery apparatus, Southwestern Portland Cement Co.	473
Recovery by Cottrell process	457
Recovery from alunite, Chappell, (P.)	153
Recovery from saline water of a Californian lake	425
Recovery plant	445
Santa Cruz Portland Cement Co.	472
Salt deposit at Leopoldshall	455
Salts, Imports of	434
Soluble from feldspar	433
Strassfurt salts deposit	453
Status of the industry	453
Symposium	549
War time production	456
Potassium nitrate from alunite, Detwiler, (P.)	779
Potassium salts imported to the U. S. Statistics	456
Potassium salts, Production in Germany, Statistics	456
Potassium salts, Separation, Sterling, (P.)	43
Powder bags, Chemically treated fabrics for	403
Powder plant, Five-hundred-ton government plant at Nashville	366
Powder plants, Government, Completed ahead of schedule	48

Powdered Coal Engineering and Equip-

ment Co. Sidelight on exposition	389
Powdered coal, Possibilities as shown by its combustion characteristics, Wilcox	35
Power (See also Water Power)	
Power resources, Emergency bill in Congress for Federal control of	226
Power situation after the war, Winder	613
Power, Surplus electric, After the war, Beckman	613
Precipitation, Electrostatic, Lyon	285
President approves prices on sulphuric and nitric acids	625
President's Readjustment and Reconstruction Commission, Bathon	13, 67
Pressure gage for Pitot-tube measurement, Use of, Anderson	250
Prest-o-lite Co., Plant	562
Price-bidding in war times, McCrea	71
Price-fixing in zinc, copper and aluminum	64
Prices fixed for sheet and plate zinc, Prior art in flotation, conforming to, Canby	225
Processes, Aluminum process at the U. S. Aluminum Co.	113
Gold-recovery, Sharwood	252
Leaching, Anderson, (P.)	63
Production, Effects of price-bidding, McCrea	262
Of aluminum, Giuliani, (P.)	71
Of general chemicals in the U. S.	683
Of quicksilver in first half of 1918	364
Public appreciation, The slow growth, Heese	689
Purchasing control centralized by War Department	360
Pyridine from ammonium sulphate mother liquor, Dodge and Rhodes, (P.)	174
Pyrites, Movement in 1913	262
Pyrometers	364
Pyrometer, Electrical controlling	125
Pyrophoric-alloy industry, American, Hirsch	210
Pyrotechnic smoke signals	510
Pyroxyline composition of exceptional durability, Majorana, (P.)	689
	262

Q

Questionnaire, Chemical, Not a call to service, Breithut	604
Questionnaire for chemists	228
Quicksilver, Economics of concentration	238
Estimated consumption in U. S. during 1918	240
In California	237
Metallurgical practice at Idria, Austria, Sterner-Rainer	721
Operation at Monte Amiata, Italy, Sterner-Rainer	770
Production in first half of 1918	689

R

Rack, Iron, Automatic soldering	210
Radio-active elements, System of, Hackh	751
Radio-active luminous materials, Savage	515
Radio-activity and radium	752
Radio photographs	515
Radium, Moore	285
And radio-activity	752
Emanation effect on the hydrogen-oxygen equilibrium, Lind	610
Emanation separation and its determination electroscopically, Underwood and Schlundt	609
Luminous materials	515
Rails, Manganese steel, Wickhorst, (S.)	97
Ramsay memorial fund	775
Raymond Impact Pulverizer Co. Sidelight on exposition	465
Readjustment commission, Bathon	13, 67
Reagents for research purposes, Organic, Heyl	274
Reagents, Organic, for research purposes, Mees	113
Recent chemical and metallurgical patents, 43, 98, 152, 208, 262, 338	683
Reconstruction agency, War Industries Board may be, Bathon	703
And War Emergency Conference at Atlantic City	750, 796
Commission, Bathon	13, 67
Conference to be held at Atlantic City	703
Reconstruction in Great Britain, Industrial	815
Refinery, Oil, Conversion of a brewery into	753
Refining baths, Role of complex salts as electrolytes in, Dean and Chang	83
Refining of antimony, Electrolytic, Wong	509
Refractories, Carborundum	623
Linbarger	489
Silicon carbide	489
Hershman, (P.)	154
Kennedy, (P.)	154
Zell, (P.)	40
Refractory, Corundum, Bigot, (P.)	768
Products, Malovsky	768
Tube made in the laboratory, Bailar	605
Regulations, Stringent, On platinum	607
Research after the war, Bancroft	613
And instruction in industrial hygiene at the Harvard Medical School	110

RESEARCH—Continued:

High-temperature, Mott	610
Industrial, Developments in	197
Industrial, Laboratory for	100
Laboratories, Cooperative, Mees	614
Organic reagents for, Heyl	274
Preparedness in the zinc industry, Choate	20, 274
Ericson	169
Purposes, Organic reagents for, Mees	113
Work organizing on a National scale	335
Resins, Characteristics	142
Extraction, Ogilvy, (P.)	44
Properties of	141
Resistance furnaces (See Furnace, Electric)	
Resolutions adopted at the Atlantic City meeting of the War Service Committees	801
Retort, Built-in laboratory, Coombs	655
Roaster, Dwight-Lloyd burner for, Fraser, (P.)	44
Roaster-extractor, Continuous, Grennawalt, (P.)	779
Roasters, D. and L., Powdered coal for igniting	797
Rosin statistics	386
Rubber, Deresination of, King	203
Embargo, King	23
Guayule	23
Imports to January 1, 1919	623
Improving low-grade	141
Industry, war problems of, King	577
Resin content and washing loss	264
Sources	23
Utilization of reclaimed, in Germany	578
Rust prevention, Allen, (P.)	153

S

Salt, brine and sea-water versus reinforced concrete, Creighton	618
Kinney	701
Salt, Statistics	386
Salts, Complex, Role as electrolytes in plating and refining baths, Dean and Chang	83
Science and the German language	274
Scott furnace	238
Searles Lake, Potash from, deKopp	425
Sea-water, salt, brine versus reinforced concrete, Creighton	618
Kinney	701
Sexagesimal trade units	178
Shales, Gilesonite and gasoline, Egloff	548
Shales, oil and paper, and albertite, Simpson	112
Economic position, Morrell and Egloff	112
Destructive distillation, Morrell and Egloff	90
Retorted, Products recovered on basic ton	95
Shawinigan Developments	562
Shawinigan Electro Metals Co., Plant	562
Shawinigan Falls, Electrochemical industries at, Randall	561
Sicily, Sulphur syndicate in	237
Sidelights on the exposition, 361, 389, 421, 465	500
Signals, Pyrotechnic smoke	689
Silica brick, Coke ovens increase demand for	467
Silica fuse filler, Arsem and Wright, (P.)	206
Silica products, Raw materials for, Bigot, (S.)	695
Silico-manganese, Analysis	116
Silico-manganese, Production of	702
Silicon carbide, Properties of	86
Silicon carbide refractories	489
Silicon deoxidizer, Petiot, (P.)	99
Silicon, Excellent qualities of, as a resistor	87
Siliconite, Zell, (P.)	46
Slag control in the iron blast-furnace by means of slag viscosity tables, Feild	294
Slags, Copper in converter, Lathrop	700
Copper in converter, Rutherford	62
Iron blast furnace, Brick from, Shaw, (P.)	653
Molten, Phosphorus from, Wenman, (P.)	263
Produced in ferrochromium furnace, Hecket, (P.)	46
Viscosity tables, Slag control in the iron blast-furnace by means of, Feild	294
Slime plant, Flow-sheet	823
Sludge acid, Concentration, Slater, (P.)	99
Smelting in British Columbia	606
Smelting, Zinc, Electric, Condensation, Thomson	69
Smoke signals, Pyrotechnic	689
Soap dyes, Universal, Huffman, (P.)	778
Soap substitutes in Germany	578
Société Cooperative for Belgium	89
Société de Chimie Industrielle	735
Society of Chemical Industry, Address to, Sholes	704
Sodium hydrosulphite, Gyuander, (P.)	209
Nitrate, Imports into Japan	41
Salts, recovery, Sterling, (P.)	43
Sulphide and other products from nitre cake, Bassett	709
Softeners, Water, Chemical control of, Clark	674
Solder, Cadmium as tin substitute in	662

Solder, Its use and abuse.....	658
Soldering iron rack, Automatic.....	210
Solder, Physical properties of cadmium-lead and tin-lead.....	662
—Without tin.....	170
Soldier chemists back to industry.....	736
Solvay Process Co., Sidelight on exposition.....	389
Spaniards, Special gold-recovery processes practiced, Jordan.....	653
Spelter (See zinc.).....	
Spelter prices in New York.....	504
Spelter specifications.....	504
Spiegel, Manufacture of, Cromlish, (P.).....	154
Spring, Helical and elliptical, Edgerton.....	762
Starch fermentation, Fernbach process.....	398
Statistical summary of tin, Miller.....	526
Statistics of chemical imports in preparation.....	
Steel (See Iron and Steel.).....	367
STEEL:	
—Annealing, hardening and drawing.....	123
—Deoxidizing with ferromanganese.....	548
—Electric, Future of, Mathews.....	612
—Forging, Development of an electric furnace for annealing treatment, Scott.....	86
—Low carbon, Properties of.....	125
—Mills, Recovery of molybdic acid for, Brown.....	274
—Lynas.....	274
—Molybdenum, Batcheller, (S.).....	161
—Rails, Manganese, Wickhorst, (S.).....	97
—Steel.....	121
—Tubing investigation.....	127
—Welding high carbon.....	302
—Welding structural steel.....	303
—Works laboratory, Speeding up, Kimber.....	512
Stoneware, Chemical:	
—American manufacturers equal European.....	476
—And the war, Kingsbury.....	476
—Development of.....	467
—Malinovsky.....	485
Sugar, Horne.....	548
Sugar cane growing under paper, Little.....	549
Sugar production, German.....	555
Sulphate, Ammonia, Dannel and Kuhn, (P.).....	209
Sulphite, Calcium, Howard and Stantial, (P.).....	209
—liquors, Utilizing waste.....	508
—pulp mill.....	6
—pulp process, Reclaiming system, Thorne, (P.).....	98
—waste liquors, Alcohol from, McKee, (S.).....	97
—waste liquors from lignin, Strehlenart, (S.).....	213
Sulphur and oxygen in the melting of copper cathodes, Skowronski.....	279
Sulphur-bearing materials, Governmental control.....	70
Sulphur dioxide, Depolarization by, Studi, (P.).....	338
—determination in burner gases, Williams.....	390
Sulphur, Movement in 1913.....	365
Sulphur production, Resumption of.....	408
Sulphur, Relation to overpolling of copper, Skowronski.....	279
Sulphur syndicate in Sicily.....	237
Sulphuric acid and sulphur monopoly in Georgia.....	173
—Denitrification, Hechenbleickner, (P.).....	43
—industry, Cottrell processes in, Heimrod and Ebert.....	309
—manufacture, Large-scale, Fairlie.....	404
—President approves maximum prices.....	625
—prices.....	615
—Production.....	364
—Production doubles since the war started.....	368
Sulphuric acid industry, Reconstruction period, Hawks.....	800
Sulphuric acid industry, Situation, Huntington.....	799
Sulphuric and nitric acid prices.....	571
Sulphur monopoly and sulphuric acid in Georgia.....	173
Sweden, New electric smelting furnaces in.....	226
Swenson Evaporator Company, Sidelight on exposition.....	465
Swiss kiln for deadburning magnesite, Steiger and Frey, (S.).....	685
Switzerland makes alcohol and acetic acid from calcium carbide.....	399
Sylvine deposit in Alaska.....	438
Synopsis of recent chemical and metallurgical literature.....	42, 97, 151, 213, 261, 336, 684, 776
Synthesis, Organic, and the duPont Company, Reese and Stine.....	569
Synthetic ammonia industry.....	368
Synthetic phenol.....	634
—correction.....	277
—Hotsen.....	540
—Peterkin.....	255
—war baby.....	368
System, Reclaiming, In a sulphate pulp process, Thorne, (P.).....	98

T

Tailings at Ajo, Excavating, Moeller.....	284
Tantiron, Chemical composition and physical properties.....	521
Tar and its products.....	581
Tar charging in gas producer.....	560
Tar fractions and their commercial products.....	582
Tar, Wood, Distillation of, Palmer, (P.).....	152
Tariff and the dye industry.....	546
—or bounty on antimony.....	65
—problems in the electrochemical industries, Jones.....	614
Tax, An outgo, not an income.....	541
Technically trained persons needed by Patent Office.....	207
Technical man and the Government after the war, Liddbury.....	613
Technical periodicals available, Enemy, Tempering, (See Iron and Steel.).....	517
Tennessee Copper Company, Description of plant.....	404
Terry differential flotation process.....	319
Testimonial to Dr. M. C. Whitaker.....	533
Thomas gas meter.....	210
TIN:	
—Average prices.....	526
—Bolivian profits.....	532
—conservation, War Industries Board plans.....	68
—Consumption and conservation.....	175
—Consumption and conservation, Stratton.....	652
—Consumption in the U. S.....	528
—Economic uses.....	526
—The estimation of, Powell, (S.).....	213
—Exports from Straits settlements.....	527
—Exports of plates, Terns plates and Taggers' tin 1908 to 1917.....	529
—Imports, Control of.....	625
—Imports 1908 to 1917.....	528
—mining.....	524
—Monthly average price in London.....	530
—Pig, Prices in New York.....	530
—plate industry.....	659
—plates, Terns plates and Taggers' tin.....	529
—Smelting plants, apparatus.....	274
—Statistical summary, Miller.....	526
—Symposium on the conservation of, without solder.....	170
—Wolfram concentrators, Miller, (S.).....	261
—World's stock.....	528
—World's supplies.....	527
Titanium deoxidizer, Pettinot, (P.).....	99
TNT, Removing suspended, From spent acid, Johnson, (P.).....	683
Toluol, Supplies after the war.....	368
Tools, Welding high speed.....	302
Town planning in copper camps.....	275
Towne-Flinn flotation apparatus.....	168
Tracings, Adhesive waterproof drawings without crimping, Carpenter.....	756
Trade units, Sexagesimal.....	178
Trained men badly needed by Government.....	34
Trained men wanted by Bureau of Mines.....	41
Tungsten concentrate, Cost of producing.....	11
—Imports.....	115
—Metallography of, Jeffries.....	280
—U. S. Tariff Commission holds hearings at Denver.....	11
—Production.....	115
Turpentines, Extraction, Ogilvy, (P.).....	386
Turpentine, Statistics.....	386
Tuyeres, Introducing fuel through, Cavara, (P.).....	779

U

Ulcio hard metal, Frary and Temple.....	523
U. S. Aluminum Co., Aluminium process at.....	252
—Chemical independence campaign.....	360
—exports and imports of chemical from 1910 to 1913.....	363
—Potassium salts imported to.....	458
—Production of general chemicals.....	364
—Tariff Commission, Hearings held on tungsten at Denver.....	11
—Report on census of coal-tar products for 1917.....	10
—world's greatest exporter of chemicals.....	363
Universal soap dyes, Huffman, (P.).....	778
Uranium steel, Radio photograph.....	515
Utah, Potash from alunite, Hornsey.....	461

V

Valve, Automatic blow-off.....	342
Valves for corrosive liquors.....	212
Valve lock chamber at Panama, Whitehead, (S.).....	684
Vernier scales.....	797
Vickers, Ltd., After the war program.....	82

W

War, After the, Program of Vickers, Ltd. and the chemical stoneware industry, Kingsbury.....	82
—and the German industry.....	476
—and the nitrogen industry, Landis.....	359
—and metallography, Jeffries.....	611
—Department authorizes construction of new plants.....	518
—centralizes purchasing control.....	623
—effect on cottonseed oil, Wesson.....	174
—Gas chemists of Bureau of Mines transferred to.....	548
—orders new census of chemists.....	82
—organizes Chemical Warfare Service.....	228
—to return skilled enlisted men to industries.....	229
—disturbances and peace readjustments in the chemical industries, Jones.....	735
—Emergency and Reconstruction Conference to be held at Atlantic City.....	368
—French chemical industry and the.....	703, 750
—Industries Board discourages further expansion of electric steel.....	286
—Industries Board may be reconstruction agency, Bathon.....	171
—Industries Board plans conservation of tin.....	703
—industries, Chemists needed in.....	68
—necessities discussed by chemists.....	328
—needs, Chrome colors for.....	145
—problems and the rubber industry, King.....	410
—problems, Electric furnace manufacturers confer on.....	577
—profits in metal industries.....	226
—times price-bidding, McCrea.....	275
—work, Chicago men unite.....	71
—work, Draftsman for, needed by Government.....	34
War and the nitrogen industry, Landis.....	172
War Industries Board, McDowell.....	828
War Service Committees, Atlantic City meeting.....	800
Warfare, Gases used in.....	798
Washing in filter presses, Sperry.....	150
Water-Power Committee agrees on bill.....	680
—Distribution of Niagara.....	12
—Federal supervision of Niagara Falls power.....	120
Water-purification plant, Mobile chlorine, Tomlin.....	70
Water softeners, Chemical control of, Clark.....	678
Welded joints, Investigation of.....	674
Welding machinery.....	584
Welding, Spot.....	301
Welds, (See Iron and Steel.).....	302
Welds, Electric, Thum.....	301
Welds, Strength of oxyacetylene, Moore, (S.).....	301
Welsbach gas mantles, Rare-earth industry in connection with.....	336
Western chemical and metallurgical field.....	510
...64, 115, 225, 275, 342, 606, 654, 702, 748, 790	
West Virginia coals, Feasibility of coal ash from, Selvig.....	826
Whitaker, Dr. M. C., Testimonial to.....	533
Widmanstätten structure welds.....	301
Williams gas analysis apparatus.....	390
Wood distillation, Statistics.....	374
Wood-waste as a source of ethyl alcohol, Tomlinson.....	552

Y

Young's modulus with temperature, Variation of, Dodge, (S.).....	151
--	-----

Z

Zeolites as potash collectors.....	431
Zinc application in the building trades, Singmaster.....	825
ZINC:	
—concentrates produced, Judge Mining and Smelting Co.....	66
—dust, Evaluation of, Wilson.....	274
—dust, Evaluation: A proposed method of analysis, Wilson.....	32
—Electrolytic, Hansen.....	279
—Gas required for distillation.....	20
—industry, Research preparedness, Choate.....	20
—industry, Research preparedness, Ericson.....	169
—Metallurgy of, Hastings.....	114
—Ore-lime briquetted.....	20
—Price-fixing.....	64
—Research preparedness, Choate.....	274, 541
—roaster gases, Cleaning.....	311
—Sheet and plate, Prices fixed.....	225
—Slab, General specifications.....	64
—smelting, Electric, Condensation, Thomson.....	62
Zirconium, Its alloys and oxide, Bradford, (S.).....	684

AUTHORS' INDEX

- ALLISON, V. C. and S. H. Kats.** An investigation of stenches and odors for industrial purposes. 549
—Measurement of odors. 747
Anderson, Evald. Notes on the use of the pressure gage for Pittot-tube measurement. 250
- BAILLAR, JOHN C.** Recent developments in the manufacture of chemical porcelain. 484
—Refractory tube made in the laboratory. 605
Baker & Co., Inc. Germany's finger in the platinum pie. 224
Bancroft, Wilder D. Chemical Warfare research. 544
—Research after the war. 613
Bardwell, E. S. Size vs. recoveries in ferromanganese furnaces. 749
Bassett, H. P. Sodium sulphide and other products from nitre cake. 709
Bathon, Wingo. The President's Readjustment and Reconstruction Commission. 13, 67
—War Industries Board may be reconstruction agency. 703
Beckman, J. W. The Future of Electrochemistry and Metallurgy on the Pacific Coast. 30
—Surplus electric power after the war. 613
Bleibinger, A. V. Recent developments in ceramics. 487
Blomfield, A. L. and J. M. Trott. Roasting Cripple Creek ores for amalgamation and cyaniding. 283
Blum, William. Classification of protective coatings on metal parts of military supplies. 610
Boyd, M. Edward. Removing plugs from steel drums. 605
Bradley, Linn. The Cottrell process for potash recovery. 457
Breithut, F. E. Chemical questionnaire not a call to service. 604
Brown, W. D. Recovery of molybdenic acid for steel mills. 274
Bruckmiller, F. W. Literature of the potash industry 1912-1917. 447
Buck, M. D. The tin-plate industry. 650
Burgess, G. K. and Paul D. Merica. The Bureau of Standards investigations on tin. 660
- CANBY, R. C.** Conforming to the prior art in flotation. 113
Carpenter, John S. Adhesive waterproof drawings and tracings without crimping. 756
—Safe load on I-beam by rule of thumb. 821
Chang, Ming Yi and Reginald S. Dean. The role of complex salts as electrolytes in plating and refining baths. 83
Chapin, Edward S. An important factor in natural dyestuff. 546
Choate, Parker C. The Recent Flotation Decision. 60
—Research Preparedness in the Zinc Industry. 20, 274
Clamer, G. H. The copper-base bearing metals. 656
Clark, Louis F. Chemical control of water softeners. 674
Clawson, Frederick A. The economic importance of our chemical industry. 363
Clayton, C. T. Who and what is the employment manager? 727
Clayton, Chas. Y. The Microscope in Ore-Dressing. 61
Clevenger, G. H. Effect of oxygen on precipitation of cyanide solutions. 604
Coe, Harrison Streeter and Andrew Ham. Calculation of extraction in continuous agitation. 663
Coghill, Will H. Molecular physics of ore flotation. 168
Coombs, F. E. Built-in laboratory report. 665
Creighton, Henry Jermain Maude. Reinforced concrete versus salt, brine and sea-water. 618
Crowe, Thomas B. Effect of oxygen on precipitation of metals from cyanide solutions. 283
- DEAN, J. G.** A wet process for extracting potash from cement dust. 439
Dean, Reginald S. and Ming Yi Chang. The role of complex salts as electrolytes in plating and refining baths. 83
Delaney, Charles R. The manufacture, use and newer development of dyewood extracts. 547
De Ropp, Alfred, Jr. Potash from Searies Lake. 425
- EDGERTON, CHAUNCEY T.** Helical and elliptical springs. 763
Egbert, H. D. and A. A. Heimrod. The Cottrell processes in the sulphuric acid industry. 309
- Egloff, Gustav and Robert Moore.** Gilsenite shales and gasoline. 548
Egloff, Gustav and Jac. C. Morrell. Destructive distillation of oil shales. 90
—The economic position of oil shales. 112
Engelhard, Charles. Germany's finger in the platinum pie. 224
Ericson, Eric John. Research preparedness in the zinc industry. 169
- FAHRENWALD, A. W.** Flotation apparatus, their design and operation. 77, 129
Fahy, Frank P. The magnetic permeability of steel. 247
—A permeameter for general magnetic analysis. 339
Fairlie, Andrew M. Large-scale sulphuric acid manufacture. 404
Farrell, James A. Foreign trade and establishing credit system. 798
Feild, Alexander L. The deoxidation of steel by ferromanganese. 548
—Slag control in the iron blast furnace by means of slag viscosity tables. 294
FitzGerald, F. A. J. The electric furnace after the war. 611
Flinn, F. E. Flotation apparatus. 168
Frary, Francis C. and Sterling N. Temple. Ulico hard metal. 523
- GENOUD, ERNEST G.** The use of micro-organisms in chemical industry. 616
Gibbs, H. D. The Color Laboratory of the Bureau of Chemistry. 547
Gillett, H. W. and A. E. Rhoads. Bibliography of Electric Furnace for Brass Melting. 89
Gillingham, C. A. Discharge characteristics of a dry cell. 610
Gottschalk, V. H. Measuring odors. 700
Grasty, J. S. Potash as a by-product. 434
Grotta, F. The metallography and heat treatment of metals used in airplane construction. 121, 191, 241, 315, 583
- HACKER, INGO W. D.** System of radioactive elements. 751
Haley, D. H. Molybdenite in Colorado. 285
Ham, Andrew and Harrison Streeter Coe. Calculation of extraction in continuous agitation. 663
Handy, R. S. Hand-sorting of mill feed. 282
Hansen, C. A. Electrolytic zinc. 279
Hastings, J. H. Metallurgy of zinc. 114
Hawks, A. W. The reconstruction period in the sulphuric acid industry. 800
Heimrod, A. A. and H. D. Egbert. The Cottrell processes in the sulphuric acid industry. 309
Hendrick, Ellwood. The beginning of the coal-tar industry. 547
—Micro-organisms in plant chemistry and nitrogen fixation. 574
Herty, Charles H. Permanent chemical independence. 353
Hesse, Bernhard C. The slow growth of public appreciation. 360
Heyl, G. Organic reagents for research purposes. 274
Hibbert, Harold. Industrial developments relating to the manufacture of acetic acid and acetone. 397
—Manufacture of glycols. 571
Hicks, J. F. G. Yttrium mixed metal. 548
Higgins, C. A. Extraction of potash from kelp. 432
Hill, Charles W. Solder without tin. 170
Hirsch, Alcan. The American pyrophoric-alloy industry. 510
Holland, Alfred H. Quantitative analysis of dyestuffs. 547
Hooker, A. H. The future of electrolytic chlorine. 611
Horne, W. D. Sugar and citric acid. 548
Hornsey, John W. Potash from alunite in Utah. 461
Hosson, E. E. Synthetic phenol. 540
Howe, H. E. Home-made optical glass. 479
Huntington, W. D. The situation in sulphuric acid industry. 799
- JAMIESON, GEORGE S.** The determination of copper in insecticides. 185
Jeffries, Zay. Metallography and the war. 518
—Metallography of tungsten. 280
Johnson Matthey & Co., Ltd. Germany's finger in the platinum pie. 604
Jones, Grinnell. The citric acid industry. 548
—The production of American dyes and coal tar chemicals during 1917. 546
—Tariff problems in the electrochemical industries. 614
—War disturbances and peace readjustments in the chemical industries. 368
Jordan, H. B. Speed-recovery processes practiced by the early Portuguese and Spaniards. 659
- KATZ, S. H. and V. C. Allison.** An investigation of stenches and odors for industrial purposes. 549
—Measurement of odors. 747
Keeney, Robert M. Manufacture of ferro-alloys in the electric furnace. 281
Kelley, F. C. Iron that can be whittled with a jack knife. 610
Kimber, H. C. Speeding up the steel works laboratory. 512
King, Andrew H. The deroasination of rubber. 141, 203
—The Rubber Embargo. 23
—War problems of the rubber industry. 577
Kingsbury, Percy C. The chemical stone-ware industry and the war. 476
Kinney, W. M. Reinforced concrete versus salt, brine and sea water. 701
Koebig, Julius. Prospects of a Chemical Industry in So. California. 27
Kokstun, V. B. Commercial uses of chlorine. 611, 667
- LANDIS, W. S.** After-the-war possibilities of the nitrogen-fixation industries. 611
—The war and the nitrogen industry. 828
Lane, Franklin K. and Van H. Manning. Stringent regulations on platinum. 607
Lathé, Frank E. Copper in converter slags. 700
Lennox, Luther W. Grinding resistance of various ores. 284
Lealie, E. H. Alcohol in the arts and industries. 566
LeSueur, Ernest A. Help for the gold producer. 747
Lidbury, F. A. The government and the technical man after the war. 613
Liljenroth, F. G. Starting and stability phenomena of ammonia-oxidation and similar reactions. 287
Linbarger, S. C. Carborundum refractories. 489
Lind, S. C. The heterogeneous equilibrium of hydrogen and oxygen mixed with radium emanation. 610
Linsberger, Milton L. Solder, its use and abuse. 658
Little, Arthur D. The Eckhart method of sugar production. 549
Litteras, J. M. Potash in Nebraska. 633
Lopez, D. and A. A. Swanson. Graphic method for fortification of the spent acids used in making nitrating mixed acids. 816
Ignas, W. H. Recovery of molybdenic acid for steel mills. 169, 274
- McCORMICK, J. H.** Fine grinding plant of the Barnes-King Co. 283
McCrea, Roswell. Price-Bidding in War Times. 71
Malinovsky, A. Chemical stoneware. 485
—Refractory products. 768
Manning, Van H. and Franklin K. Lane. Stringent regulations on platinum. 607
Mathews, John A. The future of electric steel. 612
Matthews, J. Merritt. Safe-guarding the dye industry. 800
Matos, L. J. America's progress in dyestuff manufacture. 545
—Dyes from the manufacturers' standpoint. 409
Matthews, J. Merritt. The application of dyestuffs in cotton dyeing. 547
McDowell, Charles H. Chemical Division of the War Industries Board. 800
Meade, Richard K. Recent developments in the cement industry. 471
Mees, C. E. K. Cooperative research laboratories. 614
—Organic reagents for research purposes. 113
Merica, Paul D. Aluminum and its light alloys. 135, 260, 329, 587, 635
—Bibliography. 729, 780
Merica, Paul D. and G. K. Burgess. The Bureau of Standards investigations on tin. 660
Miller, Dwight D. The remelting of aluminum pig in the electric furnace. 251
Miller, Edith M. A statistical summary of tin. 526
Moeller, Franklin. Excavating tailing at Ajo. 284
Moore, Robert B. Easum. 285
Moore, Robert and Gustav Egloff. Gilsenite shales and gasoline. 548
Morrell, Jac. C. and Gustav Egloff. Destructive distillation of oil shales. 90
—The economic position of oil shales. 112
Mott, W. R. Relative volatilities of refractory materials. 610
- NICHOLS, Wm. H.** Situation in the American dye industry. 800
Nissen, O. Aluminum-manufacturing processes used in Europe. 804
Northrup, E. F. The Northrup high-frequency furnace. 615

- OSPER, R. E. Analyzed samples wanted 747
O'Reilly, G. A. The chemical industry in export trade 358

- PARISH, HAROLD C. Speeding up metallurgical analysis 505
Peterkin, A. G. Synthetic phenol 255
Correction 277
Pictet, Amé. The distillation of coal in a vacuum 415
Pierce, E. W. Problems in testing dyes and intermediates 547
Pope, William Jackson. Future of pure and applied chemistry 716
Porter, John J. Potash from iron ores and fluxes 462
Poste, Emerson P. The manufacture of enameled apparatus 400
Franke, E. J. Development in nitric acid manufacture in the United States since 1914 395

- RANDALL, HENRY C. The electrochemical industries at Shawinigan Falls 561
Redfield, William C. Atlantic City meetings of War Service Committees 798
Reese, Charles L. Developments in industrial research 197
Reese, C. L. and C. M. Stine. Organic synthesis and the duPont Company 569
Rhoads, A. E., and H. W. Gillett. Bibliography of Electric Furnace for Brass Melting 82
Richards, J. W. The ferro-alloys 501
Riddell, Guy C. Collective and preferential flotation 822
Robinson, Theodore W. Triplex Process of Making Electric Steel 15
Rockefeller, John D. Jr. Representation in industry 799
Rosa, W. H. The extraction of potash from cement mill and blast furnace dust 549
Rutherford, Forest. Copper in Converter Slags 62

- SADTLER, SAMUEL P. Advance in industrial organic chemistry since the beginning of the war 556
St. John, H. M. The present status of electric brass melting 321
Savage, Wallace. Carbonization of coal 579
The potash industry of Germany 453
Radioactive luminous materials 515
Schludt, Herman and J. E. Underwood. Apparatus and method for determining radium in various ores 609
Schoellkopf, J. F., Jr. The development of the dyestuff industry since 1914 546
Scholes, S. R. Industrial glassware 482
Schwab, Charles M. Importance of the Merchant Marine in establishing foreign trade 798
Schwarz, A. Role of colloids in chemical processes 701

- Scott, E. Kilburn. Direct and indirect methods of nitrogen fixation 411
Nitric acid by the electric arc processes 610
Nitrogen fixation furnaces 710
Scott, Wirt S. Development of an Electric Furnace for Annealing Treatment and Forging of Steel 86
Selvig, Walter A. Fusibility of coal ash from West Virginia coals 826
Sharwood, W. J. Special Gold-Recovery Processes 63
Sholes, Charles E. Address to Society of Chemical Industry 704
Shook, G. A. Need for optical instruments in industrial laboratories 224
Shreve, R. Norris. Dyestuff symposium 545
Dyestuff symposium at Cleveland 224
Silverman, Alexander. A new illuminator for microscopes 548
A new method of microscope illumination 508
Simpson, Louis. Oil shales, Albertite and paper shales 112
Singmaster, J. A. Application of zinc in the building trades 825
Skowronski, Stanislaus. Oxygen and sulphur in the melting of copper cathodes 279
Relation of sulphur to overpoling of copper 279
Smith, Donald P. Processes within the electrode which accompany the discharge of hydrogen and oxygen 609
Sperry, D. B. Washing in filter presses 680
Steere, F. W. Quantitative determination of suspended tarry matter in gas 686
Sternner-Rainer, Roland. Metallurgical practice on Cinnabar at Idria, Austria 721
Quicksilver operations at Monte Amiata, Italy 770
Stine, C. M. and C. L. Reese. Organic synthesis and the duPont Company 569
Stochetta, H. W. The potash situation 549
Stratton, S. W. Consumption and conservation of tin 652
Sullivan, E. C. Chemical glassware 470
Swann, Theodore. The development of the ferromanganese industry in the United States since 1914 672
Swanson, A. A. and D. Lopez. Graphic method for fortification of the spent acids used in making nitrating mixed acids 816

- TEMPLE, STERLING N. and Francis C. Frary. Uleo hard metal 523
Thompson, G. W. Importance of chemistry in industry 355
Thompson, Leslie H. The kelp-potash plant of the Lorned Manufacturing Company 450
Thomson, John. Condensation in electric zinc smelting 62
Thum, Ernest Edgar. Electric welds 301
Toch, Maximilian. Portland cement construction for chemical works 487

- Tomlin, Robert K. Jr. Mobile chlorine water-purification plant 678
Tomlinson, George H. Wood-waste as a source of ethyl alcohol 552
Tone, F. J. America's supremacy in electro-chemistry 357
Trott, J. M., and A. L. Blomfield. Roasting Cripple Creek ores for amalgamation and cyaniding 283
Turnbull, Robert. Electric pig iron after the war 612
Turrentine, J. W. Experimental kelp potash plant of the U. S. Dept. of Agriculture 549

- UNDERWOOD, J. E. and Herman Schludt. Apparatus and method for determining radium in various ores 609

- VAN ARSDALE, G. D. Molecular Physics of Ore Flotation 60

- WALDO, LEONARD. Development of the magnesium industry 624
Wang, Chung Yu. Antimony smelting in China 280
Warburg, Paul M. Federal Reserve board 799
Waring, H. M. Pennsylvania Railroad antifriction and bell metals 657
Washburn, Edward W. Universities and chemical war work 545
Watkins, W. H. American dyes from a manufacturing standpoint 401
Watts, Oliver P. Effect of oxygen on the precipitation of metals from cyanide solutions 652
Sign of the potential 609
Wesson, David. The cotton oil industry in the war 548, 652
Wheeler, Harry A. Address to War Service Committees at Atlantic City 798
Wilcox, W. G. The possibilities of powdered coal as shown by its combustion characteristics 35
Williams, F. N. The direct determination of sulphur dioxide in burner gases 390
Willis, Charles P. Housing at Tyrone, New Mexico 627
Wilson, Louis A. Evaluation of zinc dust 274
A proposed method of analysis 32
Winder, C. A. The power situation after the war 613
Wong, Y. C. Electrolytic refining of antimony 509

- YANCEY, H. F. Isemannite 186

- Yasui, Katsu. Chemical and metallurgical notes from Japan 41

- ZERRBAN, F. W. A useful by-product obtainable in potash manufacture 549

